## Appendix A

Etymology for Anatomy and Physiology Terms

## What does Etymology mean?

Etymology is the origin or derivation of a word. Like tracing the roots of a tree, from the top to the bottom. This includes the origin, development and history of a word or phrase that can be shown by tracing its progress, often delineating its linguistic range and its changes in form and meaning over time.

As an exercise, let's examine the etymology of the word etymology.
Etymology (Greek) the prefix etym means truth, true meaning, real, literal meaning of a word; and 'ology' is from the Gr. word logia, which when used as the suffix -ology refers to a person who speaks in a certain manner, "the character or deportment of one who speaks of a certain subject". More succinctly, it means the "study" of a certain subject. Together, etymology is the truthful, literal study of words.

Etymology allows a chronological account of the origin and development of a particular word or element of a word, and it is very useful to know this information in science disciplines. This is because many of the terms used in subjects like anatomy and physiology are derived from Latin and Greek words. Therefore, if you are familiar with the actual, literal meaning of the numerous new words you will encounter, it will make remembering them easier. More than that, when you understand the various meanings, you will be able to apply them to terms you have never seen before and make a good guess at the meaning of that word. As an example, from to word etymology, we now know that the suffix (at the end of a word) -ology means the study of. So if we see the word physiology, at least right away we know it is the study of something. The prefix (at the beginning of a word) physio is from L. meaning nature, natural, physical. This together with ology gives us 'the study of the natural function of living things'. Learning the etymology of words is of great value across the arts, science, literature and more. Enjoy the discovery.

The terms and their origins presented were gathered from many
 different Medical Etymology sources online, including The History and Derivations of Medical Terms for Students of Medicine, Dentistry, and Nursing. By O.H. Perry Pepper, M.D. Professor of Medicine, University of Pennsylvania.

Below is the key to the abbreviations used to describe the language of the origin of the word.

| Ar. $=$ Arabic | L. $=$ Latin | Sp. $=$ Spanish |
| :--- | :--- | :--- |
| AS. $=$ Anglo Saxon | ME. $=$ Middle English | OI. $=$ Old Irish |
| Eng. $=$ English | ML. $=$ Medieval Latin |  |
| Ger. $=$ German | Mod. L. $=$ Modern Latin |  |
| Gr. $=$ Greek | OE. $=$ Old English |  |
| Ital. $=$ Italian | OF. $=$ Old French |  |

The terms are listed alphabetically below.
A
A- (or an- before a vowel) Gr. = lacking, without. For example avascular means without vessels. And anencephaly is an = without; and encephaly = brain.

Abdomen L. Adeps = "belly fat," perhaps from abdere "conceal," with a sense of "concealment of the viscera," or else "what is concealed" by proper dress. However some find this derivation "unfounded." Purely anatomical sense is from 1610s.

Abductor L. Ab = away from, and ducere = to lead. Certain muscles in the body are named for this action, and the abducens nerve is so named because it abducts the eyeball laterally.


#### Abstract

Abscess L. from abscessus = an abscess. Literally meaning "a going away, departure". From stem of abscedere = withdraw, depart, retire; ab = off, away from; and cedere = to go, withdraw. An abscess is a painful collection of pus and can develop anywhere in the body.


Accessory L. Accedere = to be added to; from ad = to, and cedere = to come. The accessory nerve is functionally accessory to the vagus.

Accommodation L. Accommodare = to make fit; from ad = to, and commodare = to adjust.
Acetabulum L. Acetum = vinegar, and -bulum, a suffix signifying the instrument. This cup-shaped part of the hip was thought to resemble a small vinegar cruet of roman times.

Acetylcholine L. Acetum = vinegar, and Gr. Chole = bile. From acetum came acetic and acetyl; from chole came choline. It is the acetyl derivative of choline.

Achilles Gr. The infant Achilles was dipped into the river Styx by his mother to render him impervious to wounds. She held him by his heel, which remained vulnerable, and it was in the heel that he was fatally wounded by an arrow at the battle of Troy.

Achondroplasia Gr. A = not, chondros = cartilage, plasis = a molding, and -ia = condition. In other words, a failure of normal development of cartilage.

Acinus L. Acinus = grape or berry; e.g., the minute grape-shaped secretory portions of an acinous gland.

Acoustic Gr. Akoustikos = pertaining to hearing. Hence the auditory nerve.
Acromegaly Gr. Akron = tip or extremity, and megas = large.

Acromion Gr. Akron = tip or summit, and omos = shoulder. The word akron gives the combing forms acraor acro-. The famous Acroplois in Athens was built on a summit.

Adductor $\mathrm{L} . \mathrm{Ad}=$ to, and ducere $=$ to lead. The muscles so named draw the part toward the medial line.

Adenocarcinoma Gr. Aden = gland, and carcinoma Gr. Karkinos = a crab, and -oma = tumor or neoplasm.

Adenoid Gr. Aden = gland, and oid = resemblance, like.
Adipose L. Adiposus. From adeps = fat. Adipocytes are fat cells.
Adrenal L. Ad = to. Renal from ren = kidney. The adrenal gland lies above the kidney and is sometimes called the suprarenal.

Adventitia L. Adventitius = coming from abroad; from ad = to, and venire = to come.
Aerobic L. Aer = air (meaning oxygen in biology); and obic = pertaining to life. Aerobic means that it requires oxygen $\left(\mathrm{O}_{2}\right)$.

Afferent L. Ad (af-) = to, and ferre = to carry. Used for a variety of structures carrying material or impulses to a center or to an organ.

Ala $\mathrm{L} . \mathrm{Ala}=\mathrm{a}$ wing. It is believed that ala is an eroded form of axilla.
Albicans L. Albicare $=$ to be white.
Alimentary L. Alimentum = nourishment. An adjective applied to digestive system or alimentary canal.
Allantois Gr. Allas = a sausage; and eidos = resemblance.
Allosteric Gr. Allos = "other" or different; and stereos = solid (object) in three dimensional space; arrangement of atoms or objects in space, spatial.

Alveolus L. Diminutive of alveus = any hollowed out structure.

Ameloblast OF. En = on, amel = enamel, and Gr. Blastos = germ.
Amphiphilic Gr. Amphi = both, on both sides; and philic = loving, attracted to. Phospholipids are amphiphilic molecules, meaning they are both polar and non-polar, mixing in both water and lipids.

Amphiarthrosis Gr. Amphi = on both sides; and arthro = joint. In Latin ambi = both, e.g. Ambidextrous.
Ampulla L. Ampulla = a jug. An onomatopoetic word whose sound suggests the object; in this case, fluid flowing from the jug. Applied in anatomy to a number or structures thought to resemble a jug.

Amygdala Gr. Amygdale = an almond. Applied to tonsils and a limbic region of the brain, due to shape.
Ana: Gr. = up, back. For example anaphase in cell division.

Anabolic Gr. Ana = up, to build up.
Anaerobic L. An (before vowels) = without; aer = air (meaning oxygen in biology); and obic = pertaining to life. Anaerobic means that it does not require oxygen $\left(\mathrm{O}_{2}\right)$.

Anastomosis Gr. Ana = up or upward, up in place or time; and stoma = mouth, outlet, opening. Hence, an opening up. Often used regarding the union or inter-communication of the vessels of one system with those of another.

Anaphylaxis Gr. Ana = again; and phulaxis = guarding; or protection. An acute allergic reaction.
Anatomy Gr. Ana = up or apart, tome $=$ a cutting. Thus, anatomy means to cut or take apart.
Anencephaly Gr. A (an-) = not, and enkephalon = brain. Without a brain. A type of congenital defect.

Aneurysm Gr. Aneurysma = a widening; from ana = across, and eurys = broad.
Angio- Gr. Angeion = a vessel. Terms angiogram (imaging of blood vessels) or angioplasty (a surgical procedure to unblock a blood vessel) are commonly used.

Annulus L. Anus = ring, and -ulnus, a diminutive suffix. Applied to many small, ring-shaped structures.
Ante L. = before. For example ante-brachium, which means the forearm.

Antero- L. Anterior = in front of.
Anti- Gr. = against; opposed to. For example, antibody, or antibiotic, or antidiuretic.
Antrum Gr. Antron = a cave. The antra are hollow caves in our skull. The antrum of the stomach.

Anus L. Anus = a ring. From root ano- 'ring'. The terminal orifice of the bowel with its "ringed" musculature.

Aorta Gr., perhaps from aeirein = to lift up, or to be hung. Hippocrates used it for bronchus; Aristotle transferred use of the term to the artery from which the heart hangs. The word was taken over into Latin as aorte, and first appeared as aorta in English in 1594.

Aphasia Gr. From aphatos, a or an = not (the "alpha privative"), and phasis = "utterance", from phanai "to speak" related to phēmē. Speechlessness.

Apical L. Apex = tip, top, or pointed end. Genitive of apex is apicis, and this explains the adjective apical.

Apo- Gr. From apo = of, from, away from; separate, apart from, free from.
Aponeurosis Gr. Apo = from; neuron = anything of a fibrous nature. Neuron had this meaning previous to Aristotle; in Athens a cobbler was a neurorrhaphos or one who sews with tendons. A good idea of the state of anatomical knowledge at that period. Aristotle limited use of the term neuron to the nerves.

Apoptosis Gr. From apo = away, and ptosis = falling or dropping. Term for 'programmed cell death'.
Appendix L. Appendere = to hang upon; from $\mathrm{ad}=$ to, and pendere $=$ to hang. Used since the early seventeenth century to mean a small process developed from the surface of an organ.

Aqueduct L. Aqua = water; and ductus = a canal. In Latin the word was spelled aquaeductus, which explains why we spell it with an e.

Arachnoid Gr. Arachne = spider, and eidos = resemblance. From this root came Latin term arachnoides = spider-like; and then arachnoid for the cobweb-like membrane covering the brain and spinal cord.

Areola L. Area = a courtyard or space, and diminutive suffix -ola. A term used in several ways, but especially applied to the pigmented area around the nipple.

Arcuate L. Arcuatus = bow; bent like a bow, arched; curvature.

Arrector L. = raising. The arrector pili (hair) is the muscle that pulls the hair when having goose bumps.

Artery Gr. Aer = air, and terein = to keep. This derivation suggests the ancient belief that the arteries were windpipes. Adopted into Latin as arteria with the same meaning until the time of Harvey.

Arthritis Gr. Arthro = "pertaining to the joints", and itis = inflammation.

Articulation L. Articulus, diminutive or artus = joint, and -atio, a suffix originally denoting action.

Arytenoid Gr. Arytaina = a pitcher, oid = like, resemblance. The arytenoid cartilages of the larynx were thought to resemble little pitchers.

Ascites Gr. Askos = a bag or bladder. No better name could be given to the fluid-filled abdomen. Sometimes ascites is applied to the fluid itself.

Asthma L. and Gr. Asthma = shortness of breath, a panting. From azein = to breathe hard. May be related to anemos = wind. Respiratory disorder characterized by labored breathing and restricted feeling of chest.

Astigmatism Gr. A = not or without, and stigma = a point. Hence a failure of the light rays to focus.

Astrocyte Gr. Astron = a star, and kytos = a vessel or cell. These cells are shaped like stars.

Ataxia Gr. A = not, taxis = order, and -ia = condition. Applied to a lack of muscular coordination.

Atelectasis Gr. Ateles = imperfect, or incomplete; and ektosis = extension (ek= out of, from); and teinein = to stretch. Altogether it means "incomplete expansion of the lungs".

Atheroma Gr. Athere = porridge; an unexpected derivation, but a good descriptive term. The combing form athero-, from the same stem, appears in the compound term atherosclerosis (skleros = hard).

Atlas Gr. Atlas was the mythological Titan who supported the world on his shoulders. Vesalius, in the sixteenth century, gave this name to the first cervical vertebra, which supports the head.

Atresia Gr. A = not, tresis = a boring, and $-\mathrm{ia}=\mathrm{a}$ condition. Hence an abnormal closure of an opening.

Atrium L. Atrium = a hall, or an entrance. The upper chambers of the heart are the atria (plural).

Atrophy Gr. A = without, and trophe = nourishment. This often indicates 'without growth'.

Atropine Gr. Atropos = one of the Fates, after whom the botanical genus Atropa is named, perhaps because the drug extracted from Atropa belladonna can quickly decide your fate.

Auditory L. Audire = to hear.

Auricle L. Auricula, diminutive of auris = ear. Used in anatomy for ear-shaped structures, e.g., structures of the upper chamber of each side of the heart, because they bear a rough resemblance to ears.

Autonomic Gr. Autos = self, and nomos = law. Hence that part of the nervous system which is selfcontrolled or autonomous.

Autophagy Gr. Auto = self; and phagein to phagia = 'eat'. Means self-eating.
Autopsy Gr. Autos = self, and opsis = to look at. In the third century B.C., the word autopsia denoted those observations on the patient made by the physician himself, in contrast to historia, supplied by the patient.

Axial L. Axis = axle or pivot
Axilla L. Axilla $=$ the armpit.

Axis $L$. Axis = axle or pivot. Used as a name of the second cervical vertebra $\left(C_{2}\right)$.
Axon Gr. = axis (or axle).
Azygos Gr. A = not, and zygos = a yoke. Therefore, this applies to any unpaired or unyoked structure, such as the azygos vein or the azygos lobe of the lung.

B
Baro Gr. Baros = weight or pressure. Baroreceptors detect pressure in the body.
Basilar Mod. L. Basilaris = basal; originally from Gr. Basis = a base.
Benign L. benignus and O.F. Benigne = kind, mild, gracious. Also friendly, generous, 'well born', gentile.
Bicuspid $\mathrm{L} . \mathrm{Bi}=$ two; and cuspis = point. The term premolar is also used for these teeth.
Bile L. Bilis = bile. Many medical terms come from this root, bilis, including bilirubin (ruber $=$ red) and biliverdin (viridis = green).

Biopsy Gr. Bios = life; and opsis = vision. Biopsy is an examination of tissue removed from the living body.
Bifid $\mathrm{L} . \mathrm{Bi}=$ two, double; and findere = to cleave. To bifurcate.

Blastoder Gr. Blastos = germ or bud; and derma = skin. A layer of cells of a blastula.

Blastula Gr. Blastos = germ or bud. A sprout. As a suffix -blast means maker. Fibroblast = fiber maker.

Brachial L. Brachium = an arm.

Bradycardia Gr. Bradys = slow; and kardia = heart. Term for lower than normal heart rate.
Bregma Gr. Bregma = front of the head.

Brevis L. Brevis = short or brief.

Bronchiectasis (n.) Gr Bronkhia = the bronchial tubes; and ektasis = a stretching out, extension, dilation. From ek (ex-) = out; and tasis = a stretching, tension. A condition of abnormally dilated bronchial tubes.

Bronchus Gr. Bronchos = windpipe; originally from Gr. Brechein = to moisten. Plato believed that swallowed liquids went down the trachea into the bronchi. Bronchiole (-iole) = little windpipe.

Buccal L. Bucca $=$ the cheek.

Buccinator L. Buccinator $=$ a trumpeter. Hence the muscles of the cheek.

Bulla L. Bulla = a bubble. The adjective is bullous; both are used of a lesion which resembles a bubble.

Bursa ML. Bursa = a purse, hence any closed sac.

C
Cadaver L. Cadere = to fall dead or to die.

Calcaneus L. Calcaneus = relating to the heel.
Calculus L. Form calc = calcium or stone; and the diminutive ul = little, e.g., a kidney stone.

Callosum: L. =tough or hard. Often referring to callused thickened skin. The corpus callosum in the brain means 'callused body'. Though it is connected the two hemispheres of the cerebrum.

Calyx Gr. Kalyx = cup of a flower, vessel or husk. In physiology applied to the recess (container) in the kidney. The plural of calyx is calicies.

Canaliculus L. Canalis = channel; and -icule is a diminutive = little or tiny canal. Canaliculi (plural).

Canthus Gr. Kanthos = corner of the eye.
Capillary L. Capillaris = relating to the hair; hence any structure as fine as a hair.

Capitate L. Caputatus = headed; from caput = head. Similarly 'capitis' is of the head.

Capitulum L. Caput = head, diminutive ulum = little; literally "little head".

Caput L. Caput = head. e.g., caput Medusa regarding the mythological Gorgons with hair made of live snakes. Can be applied to the dilated veins which appear on the abdomen, due to obstruction of the portal circulation.

Carbohydrate L. Carbo = carbon; and hydr = water. This is a 'hydrated carbon' molecule.

Carcinoma Gr. Karkinos = a crab, and -oma = tumor or neoplasm. Celsus used carcinoma for all malignant growths; added the adjective kakoethes = malignant to designate some which required surgery.

Cardia Gr. Kardia = heart. Used to denote the end of the stomach lying nearest the heart.
Carina L. Carina = keel of a boat, used for several anatomical structures having a central ridge.
Carotid Gr. Karoun = to put to sleep. Horses and goats depend entirely on the carotids for their cerebral blood supply (as vertebral arteries are insufficient). By applying pressure to these arteries, a goat can fall down motionless due to lack of blood to brain, and to return to normal by release of pressure. Thus in ancient days it was called a "sleeper hold".

Carpus Gr. Karpos and L. Carpus = wrist.
Cartilage L. and OE. Cartilago = gristle; firm, animal tissue. Possibly related to cratis "wickerwork".
Caruncle L. Car = fleshy mass; and the diminutive uncle = small.
Cauda L. Cauda = a tail. Such as the cauda equina or "horse's tail" of the spinal cord.
Cava L. Cavus = hollow, as in the word cave.
Caveolae L. From Cavus = hollow, cave; with diminutive -olae or -oli = little caves. Singular is caveola. Caveolae are invagination on the plasma membrane of smooth muscle cells.

Cecum L. Caecus = blind, hidden. OI. Ca'ech = one-eyed; or coeg = empty. Cecum is the blind-ended pouch at the beginning of the colon.

Celiac Gr. Koilia = the belly.
Cell L. Cella $=$ a small chamber or room. Also for compartments and cavities.

Cephalic Gr. Kephale = having a head.
Cerebellum L. Diminutive of cerebrum = brain; thus cerebellum meaning "little brain".
Cerebrum L. Cerebrum = brain.

Cerumen L. Cera (cero) = wax, waxy. From Latinized Gr. kēros = "beeswax". This is ear wax.
Cervix L. Cervix = neck. Cervical vertebrae of neck; neck of the uterus, e.g., cervical region.
Chiasm Gr. Chiasma = two crossing lines. Derived from the Greek letter chi, in Greek script was written c.
Choana Gr. Choane $=$ a funnel. Applied to the posterior naris leading to the pharynx (throat).
Cholangitis Gr. Chole $=$ bile, angeion $=$ vessel, and - itis $=$ inflammation.
Cholecystokinin Gr. From chole = bile; and cysto = sac; and kinin = move. Thus, together meaning the movement of the bile-sac. This is what the gallbladder that stores bile does in response to this hormone.

Chondral Gr. Khondros, Latinized to Chondros = cartilage.
Chorda L. Chorda $=$ a string or cord. In Greek, the corresponding word chorde signifies the intestine.
Choroid Gr. Chorion = "outer membrane of the fetus," 1540s, medical Latin, from Greek khorion "membrane enclosing the fetus, afterbirth," and eidos = resemblance, or oid = like.

Chromatophore L. Chromo = coloror pigment, and phor $=$ to carry or to bear.
Chyle Gr. Chylos = juice.

Chyme Latin Chymus, and Gr. Khymos (khylos) = juice. To describe the semi-liquid food in the stomach. Elements persists with terms parenchyma = proper tissue or substance of organ or part, and mesenchyme.

Ciliary L. Ciliaris = pertaining to eyelashes; from cilia = eyelashes. Used for any hair-like structure.
Circulation L. Circulare = to make a circle. Blood movement was known to follow a circular course.
Cirrhosis Gr. Kirros = red-yellow, yellow-brown, tawny yellow color. Term coined the yellowish liver of fat and fibrosis. Now implies more fibrosis and hardening, regardless of color.

Cisterna L. Cisterna $=$ a reservoir or cistern.

Clavicle L. Clavicula, diminutive of clavis $=$ a key. So named for its resemblance in shape. . Cleido also $=$ key.
Coccyx Gr. Kokkyx = cuckoo. From a supposed resemblance of this bone to the beak of a cuckoo.
Coelom Gr. Koiloma = a hollow. Used in embryology, and for the general body cavity in the adult.
Collagen Gr. Kolla = glue; and gennào = to produce.
Colloid Gr. Kolla = glue; and oid = like or resembling. Viscus protein solutions are called colloid solutions.
Commissure L. Commissura; from con (com-) = together; and mittere = to put. Hence a joining or a seam.

Concha L. = shell. The nasal conchae in the nasal cavity are so named. Cochlea also means shell.

Condyle L. Condylus and Gr. Kondylos = knob at the end of a bone; a knuckle, joint, knob.

Conjunctiva L. Con = with, and jungere (junctus) = to join.
Constrictor L. Con = together; and stringere = to pull.
Conus Gr. Konos = a cone or peg. Used for various peg-shaped anatomical structures. For example the conus medullaris of the spinal cord.

Coracoid Gr. From korakoeides = raven-like; from korax = raven; from resemblance to a raven's beak. ML. From coracoides = crow's beak.

Cornea L. Corneus = horny. The cornea of the eye was formally called the cornea tela, which meant the horny tissue or layer.

Cornu L. Cornu = horn; corn on the foot; hardening or thickening of skin. Also applied to horn-shaped structures in body.

Coronary L. Coronarius = pertaining to or like a crown. The coronary arteries of the heart are named because they encircle the top portion of the heart, like a crown.

Corpus L. Corpus = body, e.g., corpus luteum L. Luteus = yellow. Describing an ovarian structure.
Corpuscle L. Corpus = body; and -iscle is a diminutive = small body. The renal corpuscle is a small structure in the nephron of the kidney.

Cortex L. Cortex = outer layer or bark. In anatomy, it is applied to the outer layer of organs or structures.

Cranium Gr. Kranion and Mod. L. Cranium =pertaining to the skull.
Cremaster Gr. Kremastos = hanging, suspending (suspenders). The cremaster muscle used by Galen for the muscle on which the testicle is hung.

Cribriform L cribrum = a sieve, and forma = form. Applied to the sieve-like plate of the ethmoid bone.
Cricoid Gr. Krikos = a circle or ring, and eidos = resemblance, like.

Crista L. Crista = tuft, comb or plume; also meaning crest or ridge; with galli = chicken or hen's crest.

Crus L. Crista = leg. Any structure in anatomy resembling a leg or, in the plural crura, of a pair of dividing structures.

Cryptorchidism Eng. Crypt = hidden; and Gr. orkhis or orkhid = testicle. A condition of the absence of one or both testes from the scrotum (usually when they fail to descend before birth).

Cuboid Gr. Kybos $=$ a cube, and eidos $=$ resemblance. A square bone in the foot.

Cuneiform L. Cuneus = a wedge, and forma = form; e.g., for wedge-shaped bones in the wrist and ankle.

Cutaneous L. Cutaneus = relating to the skin; from cutis = skin.
Cycloplegia Gr. Kuklos = circle; round eye. Eng. cyclo = circle; and Gr. Ops = eye. Similar to cyclops meaning round eye. Gr. Plessein = to strike, blow. In Eng. is plegia = to strike or blow. Cycloplegia is paralysis of the ciliary muscle of the eye.

Cyst Gr. Kystis and Mod. L. Cystis = bladder, pouch-like bag or vesicle. The term cystitis means inflammation of the bladder.

Cyto- Gr. Cyto =prefix for cell. From Greek kytos meaning "hollow, as a cell or container." Also vessel or urn; in Latin = vas. From same root "-cyto-" and the suffix "-cyte" which denote a cell.

Cytokine Gr. From cyto = cell; and -kine = referring to movement. Cytokines secreted by cells in response to antigens stimulate cell movement.

D
Dactyl Gr. Daktylos = finger or toe.

Decidua L . Decidus = falling off. The decidua is the altered mucous membrane lining the uterus during pregnancy and puerperium.

Decussation L. = intersection of two lines. Used to describe the 'crossing over' from one side of the body to the opposite that occurs in nerve fibers from the CNS to and from the PNS.

Deferens L. De = away, and ferre = to carry.
Deltoid Gr. Delta = the Greek letter D, and eidos = resemblance. Applied to the deltoid muscle because of its triangular shape.

Dendrite Gr. = of or pertaining to a tree; tree-like. From dendron = tree; e.g., dendritic cells have branches.

Depressor L. De = down, premere = to press, and the suffix -or = the agent.
Detrusor L. From de = down and trus = push. Smooth muscle of bladder that contacts to push urine out.

Diabetes L. From diabet = to flow through. In diabetes mellitus, melli = honey, sweet. In diabetes insipidis, insipid = tasteless.

Diapedesis Gr. Dia = through; and pēdan = to throb or leap. Diapedesis is the passage of blood cells through capillary walls into the tissues.

Diarrhea L. From diarrhoea, Gr. diarrhoia. From dia = through; and rhein or -rrhea = to flow. Together it means a flowing through, or to flow through. It refers to the frequent evacuation of loose, watery stools from the bowels.

Diaphragm Gr. Diaphragma $=$ a wall or partition; from dia $=$ across, or between; and phragma $=$ a wall.
Diaphysis Gr. Dia $=$ between, or across. And physis $=$ growth.
Diastole Gr. Dia = across, apart; or between; and stellein = to send. Together means to dilate or spread; e.g., diastole is a relaxed state of the heart.

Diencephalon Gr. Dia (di-) = through; and encephalon = brain. Hence the "between" brain.

Digastric $\mathrm{Gr} . \mathrm{Di}=$ two, and gaster = belly. Name of a skeletal muscle, which has two different bellies.

Distal L. Distare = to stand apart or to be distant. The region furthest from the site of origin.
Diuresis L. from Gr. diourein = to urinate; from dia = through and ourein = urinate, meaning excessive secretion of urine. A diuretic causes excessive urination, whereas an antidiuretic prevents it.

Dorsal L. Dorsum = the back. Like the dorsal fin of a whale is on its back.

Duodenum L. Duodeni $=$ twelve, from duo $=2$, and den $=10$. This short initial region of the small intestine is named because it was measured to be 12 fingerbreadths long.

Dura L. Durus = hard or tough. The dura mater (mother) of the meningeal layers is thick and tough.

Dysphagia Gr. Dys = bad or disordered; and the root phag- (phagia) = eating, or to eat. This is a term for difficulty or discomfort when swallowing.

## E

Ectopic Gr. Ec = without, outside; topic = place or location. For example, an ectopic pregnancy occurs outside of the uterus (the normal place) often in the uterine or fallopian tubes.

Emphysema Gr. = swelling, inflation. From em = in; and physan = to blow in, inflate; to play the flute. Related to emphusēma = to puff up. ML. = distention with air or other gasses. The lung condition emphysema often involves having a 'barrel chest' from retaining too much air.

Empyema Gr Em or en = in or entry; and pyon = pus. It is a lung infection, with accumulation of pus in the pleural fluid of the plural cavity.

Encephalitis Gr. From encephalos = brain; and itis = inflammation. Means inflammation of the brain.
Endocrine Gr. Endon = within; and krinein = to separate. Denotes a gland whose product passes into the blood, being separated within the gland. In essence also means to secrete.

Endergonic L. Endo = in, incoming; and erg = work. Related to reactions that require energy input.

Endometrium Gr. Endo = within; and metra = womb. Endometrium is the innermost lining or uterus.

Ependymal Gr. Epi = upon, and endyma = a garment, e.g., the lining of the central canal of the spinal cord.

Epicardium Gr. Epi = upon, and kardia = heart.

Epididymis Mod. L. from epi = on, upon, on top of; and Gr. didymos = testicle. It literally meant "double, twofold", and together epididymis means "that which is on the testicles".

Epigastrium Gr. Epi = upon; and gaster = stomach.

Epiglottis Gr. epi = upon; and glotta = tongue. Epiglottis is above the glottis covering the larynx.

Epidermis Gr. epi = upon or above; and derma = skin. The most superficial exposed layer of skin.

Epinephrine Gr. Epi = above, and nephrine from Gr. Nephros = kidney.

Epiphysis Gr. Epi = upon, and physis = growth.

Epiploic Gr. Epiploon = omentum. The epilploic appendages hang from the omentum.

Epispadas Gr. Epi = upon, and spadon = a tear. Also "eunuch", related to spayed. Applies to a congenital opening of the urethra on the upper surface or dorsum of the penis.

Epithelium Gr. epi = upon; and thele = nipple. Epithelium is one of the four primary tissues of the body.

Eponychium Gr. epi = upon; and onyx = nail. The eponychium is the cuticle of the nails.

Erector L. Erectus = upright. Applied to a muscle which causes a structure to stand upright.

Erythrocyte Gr. Erythro = red; and cyte = cell. Erythrocytes are the red blood cells of the body.

Esophagus Gr. Oisophagos = gullet. The Greek term was formed from oiso, the future tense of phero = to carry, and phagein = food.

Ethmoid Gr. Ethmos = a sieve, and or oid = like, resemblance; e.g., the ethmoid bone of the skull.

Eversion L. Evertere = to turn outward; from ex $(\mathrm{e}-)=$ out, and vertere $=$ to turn.

Exergonic L. Ex = out, outgoing; and erg = work. Related to reactions that liberate stored energy.

Extensor L. Extendere = to stretch out. Many skeletal muscles have extensor in their name to indicate that part of their function is the action of extension.

Extrinsic L. Extrinsecus = originating or acting outside; from exter = outside, and -secus = on the side.

F
Falciform L. Falx = sickle, and forma = form or shape. The falciform ligament of the liver has this shape.

Fascia L. Fascia = a ribbon, a band, a bundle or fillet; to bind together. Fasciculus =a little bundle.

Femur L. Femur = thigh, applied to the proximal bone of the upper limb.

Fibula L. Fibula = a clasp or a pin; originally from figo = fasten.

Fibrosis ML. Fibra = fibrous growth or development in an organ. From Latin = a fiber, filament and Greek suffix - osis = state or condition; in medical terminology $=$ a state of disease.

Filum L. = thread. Filum terminale (end) a fibrous ligament = thread at the end. Filiform thread shaped.

Fimbria L. Fimbria = fringe; e.g., the processes at the abdominal end of the uterine (Fallopian) tube.

Flexor L. Flectere = to bend. From the same root comes the word flex, flexion, and flexure $=$ a fold or crease.

Follicle L. Folliculus, diminutive of follis = a bag, container.

Foramen L. Foramen = an opening; from forare = to bore. Commonly used to denote 'hole' in anatomy.

Fornix L. Fornix = arch or vault. The fornix of the brain is arch-shaped.

Fossa L. Fossa = a ditch. Used in anatomy for depressed areas.

Fovea L. Fovea = a pit; e.g., fovea capitis in femur and in ophthalmology, central depression in the retina.

Frenulum L. From frenum = bridle. The diminutive -ulum = little = bit, bridle .

Frontal L. Frons = forehead.

Fundus L. Fundus = bottom; base of an organ. Often bottom turned upside down, e.g., fundus of uterus.

Funiculus L. From funis = rope. Diminutive -iculus = a cord, small rope. Nerve bundles are funiculi (plural).

G
Galactorrhea L. galacto = milk; and rrhea (or rhoia) = flux, or to flow. The spontaneous flow of milk from the breast, unassociated with childbirth or nursing. Can occur in both sexes.

Ganglion Gr. Ganglion = a swelling or bundle; "anything gathered into a ball".

Gastric Gr. Gaster = stomach or belly.

Genitalia L. Genitalis = pertaining to reproduction.

Genu L. Genu = the knee, but used in anatomy of any bent structure.

Glabella L. Glabellus = smooth. Name for the prominence on the frontal bone just above the nose. Glabrous skin is hair-free skin, found on the palms and soles.

Glans L. Glans = acorn. Used for the head of the penis, which is shaped somewhat like an acorn.

Glenoid Gr. Glene = joint socket, and eidos = resemblance or like. Homer used the word genoid to signify the pupil of the eye; because of the small images seen reflected there, it also meant doll or little girl.

Glial Gr. Glia = glue; also glei = to stick together; e.g., neuroglial cells. Related to cella L. = storeroom.

Glomerulus L. Glomer = ball of thread. The diminutive of Latin glomus = little ball. The glomerulus are structures in the kidney and retina that are shaped like little bundle of yarn.

Gluteal Gr. Gloutos = buttocks. For example the gluteus maximus is the largest of three buttock muscles.

Glycemia Eng. Glyco- =sugar and -emia = condition of the blood. Together means presence or level of sugar in the blood.

Glycocalyx L. and Gr. Glyco = glucose or sugar; and calyx = cup, vessel or husk.

Gonad Gr. Gone = a seed or generation for reproduction.

Gonadotropin Gr. Gone = a seed for reproduction; and troph = to nourish or feed.

Granulosum L. From granum = grain, seed. Diminutive granulum = granule, a little grain.

Gubernaculum L. Gubernaculum = helm or little governor; from gubernare = to control, and the diminutive suffix -culum. Gubernaculum of testis is the fetal cord which guides the descent of the testis.

Gut AS. Guttas = the bowels.

Gyrus L. Gyrus and Gr. Gyros = a ring, circle; also a circuit or career. A gyrus is a twisting fold of brain tissue.

## H

Hallux L. Hallux = great toe.

Hamulus L. Hamulus, a diminutive of hamus = a hook. Applied to hook-shaped structures, e.g., the hamate is a carpal bone with a hook like projection.

Haustrum L. from haust = draw in. Haustrum = scoop. Haustra of large intestine are puckered structures.
Helicotrema Gr. Helix = a coil or screw, and trema $=$ a hole. Applied to the communication between the two channels of the cochlear convolutions.

Hemi- Gr. From hemi-, and Latin from semi- = half; hemisphere. Hemidesmosomes in cell attachments.
Hemopoietic Gr. Hemo = blood; poietic = forming or making, together 'maker of blood'.
Hepato- Gr. From hēpatikos and hēpat- = liver. Hepatocyte = liver cell. Hepatitis = inflammation of liver.
Hernia L. Hernia = a rupture.
Hilum (hilus) L. Hilum = a small thing; depression or notch (trifle).
Hippocampus Gr. Hippokampos, hippos = horse; and kampos = a sea monster. The hippocampus of the brain is named this on its supposed resemblance the part horse and part dolphin or fish, alleged to have pulled Neptune's (the Roman god of water) chariot.

Histology Gr. Histo = tissue web, fabric; and logos = study or "branch of knowledge, science".
Holo Gr. From holos = "whole, entire, complete", also "safe and sound".
Homeostasis Gr. and L. From Homeo = the same; and stas = to stand, or stay or place. To stay the same.
Homunculus L. Homo (genitive hominis) = male human; and the '-culus' is a diminutive suffix, which literally means "little person". Thus the term from the 1650s = "tiny human being produced artificially".

Humerus L. (H)umerus = the shoulder bone; related to Gr. Omos = the shoulder.
Humor L. umor (humor) = body fluid. Related to umere = be wet, moist. Also = fluid or juice of an animal or plant; liquid, dampness; (medical) humor. In old medicine = any of the four body fluids: 1) blood, 2) phlegm, 3) choler, and 4) melancholy or black bile). The eye as aqueous humor and vitreous humor.

Hyaline Gr. From hyalinos = of glass or crystal; and from hyalos = glass. Latin hyalinus = glassy; made of glass; transparent. Hyaline cartilage is smooth and glassy.

Hydrophilic Gr. Hydro = water; and philic = loving, attracted to. Substances that dissolve (are soluble) in water. These can also be called polar molecules.

Hydrophobic Gr. Hydro = water; and phobic = fearing, avoiding. Substances that do not dissolve (are not soluble) in water. These can also be called non-polar molecules.

Hydrocele Gr. Hydro = water; and kele = swelling, e.g., a collection of fluid in the tunica vaginalis of the testes.

Hyoid Gr. Hyoeides and ML hyoides = "having the form of the Greek capital letter upsilon" ( $\Upsilon$ ); "shaped like the letter U," from hu "letter U" (in later Greek called upsilon) + -oeides "like" (see -oid).

Hyper Gr. Hyper = excessive; above normal; e.g., hyperglycemia means higher than normal blood sugar.
Hypo Gr. Hypo = less, below normal. e.g., hypoglycemia means lower than normal blood sugar.

Hyperglycemia Gr. Hyper = excessive; above normal; glyc = glucose or sugar; and emia = blood.
Hypoglycemia Gr. Hypo = less, below normal; glyc = glucose or sugar; and emia = blood.

I
Ileum Gr. From eilo (colic) = twisting, winding, turning. The ileum is the last part of the small intestine.
Ilium L. Ilium = the flank, and the iliac bone. Originally because the small intestines are largely supported by this bone, and the old term for the small intestines was ilia (plural of ilium).

Incisor L. Incidere = to cut into; from in = in; and caedere = to cut. Applied to the eight cutting teeth.

Incus L. Incus (incudis) = anvil, a block with a hard surface, for hammering other things on (forging).

Infundibulum L. Infundere = pour in; infundibulum = funnel. Relates to funnel-shaped organ or body parts.
Inguinal L. Inguen = groin.

Innominate L. Innominatus = unnamed; from in = not, and nomen = name. There are two structures in the human body with the name 'innominate', one artery and one bone.

Insertion L. In = in, and serere = to put. Hence, the point of attachment of a muscle in the more movable of the two structures which it joins.

Inter L. Inter = between.

Intercalate L. inter = between; and calare = proclaim solemnly. To put between, e.g., the intercalated disc that sit in between the bones of the vertebral column.

Interstitium L. from inter = between; and sistō or stes = to stand, place. It is occurring in or being an intervening space or segment. Of, relating to, or forming an interstice; an interstitial space.

Intestine L. Intestinum = intestine. From intestinus, meaning inner or inward. The popular term "innards" expresses the same thing.

Intima L. intimus = innermost sheath, intimate, closest. Tunica intima is the inner lining of blood vessels. Inversion L. Invertere = to turn about or inside out.

In vitro L. Vitrum = "glass" (see vitreous); "in a test tube, culture dish, etc.;" literally "in glass".

In vivo L. Vivere = "to live"; in vivo = "within a living organism," (see vital or vitreous).

Ipsilateral L. Ipse = self or same, and latus = side.
Iris Gr. Iris = rainbow. The iris of the eye is the 'colored' part of the eyeball.

Ischium Gr. Ischion = hip joint or hips; also known as the 'seat' or 'butt' bone, of the os coxa (pelvis).
-itis Gr. It is = "diseases characterized by inflammation" (of the specified part). Feminine suffix -ites "pertaining to." Feminine because it was used with an implied nosos "disease," a feminine noun.

## J

Jejunum L. Jejunus = fasting or empty. Galen named the second part of the small intestine nestis = fasting, because he believed it was always found empty after death.

Joint L. Jungere = to join.

Jugular L. Jugulum = throat. Hence the name for these veins of the throat.

## K

Kalium L. Derived from Latin via Arabic qali for alkali, for potassium, which was derived from the word English "pot ash," which was used to isolate potassium salts. Hence the chemical symbol K (for potassium).

Ketonuria L. Keto = ketone, a type of chemical; and uria = of the urine. Ketonuria is presence of ketone bodies in the urine, which is not normal unless fasting, no carbs in diet, or have diabetes mellitus.

Kyphosis Gr. Kyphos = crooked or bent, and -osis = condition, e.g. 'hunchback' of vertebral column.

L
Labia L. Labium = lip.

Labyrinth Gr. Labyrinthos = a maze.

Lacrimal L. Lacrimal = a tear.

Lactate L. Lactare, from lact- = milk. Lactation $=$ secrete milk from the breasts. Hormone prolactin promotes lactation.

Lacuna L. = hole, pit. Figuratively = a gap, void, want. Diminutive of lacus = pond, lake; hollow, opening. For bone and cartilage tissue mature cells sit in lacunae (plural).

Lamella L. From lamina = thin plate, leaf, layer. Diminutive -elle to indicate smaller.

Lateral L. Latus = side. Away from midline.

Lemniscus Gr. Lemniskos = a band. For example a spinal lemniscus tracts on CNS.
Lenticular L. Lens = a lentil, and a diminutive suffix. This adjective means shaped like a lentil.
Leukocyte Gr. Leuko = white; and cyte = cell. Leucocytes are all the white blood cells of the body.

Levator L. Levator = anything that raises; from levare = to lift.

Ligament L. Ligamentum = ligament; from ligare $=$ to bind.
Ligand L. Ligare (Lig) = to bind. Ligands in the body are substances that bind to receptors.
Limbic L. From limbus = of a boarder, or edge. The limbic system boarders the cerebrum in the brain.

Linea OF. Lineal, linealis "pertaining to a line". L. Lien = spleen. Related to the Greek term splen = spleen.
Lingula L. Lingula, diminutive of lingua $=$ tongue.
Lithptripsy L. Litho = stone; and trypsy = crushing. A technique using ultrasound to pulverize stones.
Lobar Gr. Lobos = lobe. Diminutive lobular = little lobe. Also lobules infers 'tiny'.

Longissmus L. Superlative of longus = long. Applied to the long muscles of the back.
Longus L. Longus = long. For example the muscle the adductor longus.

Lordosis Gr. Lordos = bent backward. Applied to the condition of spinal column "lordosis".

Lucidum L. = clear. Lucid is to express clearly. Stratum lucidum means a clear layer.
Lumbar L. Lumbus = the loin.

Lunate L. Lunatus = crescent shaped, pertaining to the moon.

Lunula L. Luna = moon; also an alchemical name for "silver"; diminutive ula = little.
Lymph L. Lympha = water, clear water, a goddess of water. A variation of lumpæ = waters. In physiology lymph is a colorless body fluid.

M
Macula L. From macula = spot. For example, macula lutea of eye means yellow spot (lutea = yellow).
Magnum L. From magnus = great; large. The foramen magnum of the skull is the great hole.

Malleolus L. From malleus $=$ hammer. Diminutive -olus $=$ little hammer.

Mammary L. From mamma $=$ mother. Mammary $=$ of or pertaining to a breast. Mammillary $=$ little breast.
Manubrium L. From manus = hand. Manubrium = handle, hilt; handle-like process.
Mandible L. Mandibula = jaw; from mandere = to chew, and the suffix -bulum, indicating the instrument.
Manus L. Manus = hand; also manual.

Manubrium L. Manus = hand, to be "handle-like process"; handle, hilt, "that which is held in the hand".

Masseter Gr. Maseter = chewer. One of the few muscles named in the writings of Galen.
Mastication L. Masticare $=$ to chew.

Mastoid Gr. Mastos = breast or nipple, and oid = like, resemblance.
Maxilla L. Mala = jaw; maxilla = upper jaw bone.
Meatus L. Meatus = a canal, or channel or way.
Mediastinum ML. Mediastinum = medial, intermediate; being in the middle.
Medulla L. Medulla = marrow. Often means 'middle' or non-cortical portions of a structure.
Menses L. menses = month. Also moon as in month. The monthly discharge of blood from the uterus.
Meninges Gr. Meninx = membrane; plural, meninges.
Meniscus Gr. Meniskos = crescent-shaped body. Diminutive of mene "moon" and isc = little; meniscoid.
Mesentery Gr. Mesos = in the middle, and enteron = intestine.
Mesoderm Gr. Mesos = middle, and derma = the skin.

Meta Gr. Meta = after or beyond.
Metabolism Gr. and L. From metabol = change; and -ism = process.
Microvillus L. Micro = small; and vullus = hair. Structure is an extension of plasma membrane of a cell. Plural is microvilli.

Mitochondria Gr. Mito = thread or fibers; and chondr = grain. Fibrous grainy structure.

Molar L. Mola = a millstone. Hence, a grinding tooth.

Monomer L. Mono = one; and mer = part. A monomer is the simplest configuration of a molecule.
Muscle L. Musculus, diminutive of mus = a mouse. For skeletal muscle because these muscles resembled a little mouse running under the skin.

Myasthenia L. Myo. From Greek mus = muscle; literally "mouse". Gr. Asthenia = abnormal physical weakness or lack of energy; feeble; without strength. The autoimmune disorder myasthenia gravis is characterized by skeletal muscle weakness.

Myelin Gr. Myelos = marrow; the brain, innermost part.
Mylohyoid Gr. Myle = a mill; and hyoid (see hyoid). The word myle was for the posterior teeth, the grinders, and became mola in Latin, hence molar for these teeth. Mylohyoid, refers to the posterior part of the jaw and the hyoid bone.

## N

Nares L. Naris = nostril; e.g., the external nares are the nostrils of the nose.
Natrium L. This is sodium's ( Na ) Latin name, derived from the Greek 'nítron'.
Navicular L. Navis = boat, and the diminutive suffix-cula; e.g., this bone suggests the shape of a little boat.
Nephron Gr. From nephros = kidney. The nephron is the functional unit of the renal system.
Neurilemma Gr. Neuri = neuron, nerve; and lemma = husk, sheath. A structure that covers a nerve.
Nigra L. = black; dark. For example the subtancia nigra in the midbrain is so named because it looks like a black substance because it is a heavily pigmented area.

Node L. Nodus = a knot. Used, for example, in lymph node.
Norepinephrine Eng. And Gr. Nor = normal, epi = 'above', and nephrine from Gr. Nephros = 'kidney'.
Nucha ML. Nucha = the back of the neck. This word, originally Arabic, was adopted into Latin and changed in French to nuque.

## 0

Obturator L. From obturare (obstructor) = to stop up, to close, shut. Literally 'obstructor' or to 'stop up'.
Oculomotor L. Oculus = eye, and motor = producing movement; e.g. A nerve for muscles moving the eye.
Oid Gr. Oeides, as suffix -oid = like, like that of, thing like a $\qquad$ . Latinized form = oid. Related to idein $=$ to see.

Olecranon Gr. Olenokranon, from olene = elbow; and kranos = helmet. In other words, the protector of the elbow.

Olfactory L. Olfacere = to smell.
Omphalocele Gr. Omphalos = umbilicus; and kele = swelling, used here in the sense of hernia. Hence an umbilical hernia.

Oocyte Gr. From oo = egg; and -cyte = cell. The female reproductive sex cell (gamete).
Ophthalmia Gr. Ophthalmos = eye; and -ia = disease. The suffix -itis may be more common now.

Opponens L. Ob (op-) = against; and ponere = to place. For example, an opposing muscle.
Oral L. Os = mouth; genitive, oris.

Orbicular L. Orbicularis = circular or disc-shaped; orbis = circle or orb; e.g. Orbicularis muscle of the eye.
Orbit L. Orbis $=$ a ring or circle.
Orchid Gr. Orchis = testicle. Hence the word orchitis, for inflammation of the gonads.
Organ L. Organa = a musical instrument. From Greek organon = implement, tool for making or doing; musical instrument, literally "that with which one works".

Orifice L. Orificium = an opening.
Origin L. Origo = starting point.
Osis Gr. suffix -osis = state or condition; in medical terminology = a state of disease. In Latin = -atio.
Osmosis Gr. Osmos = thrust, or pushing. Osmosis is the force applied by water based on the concentration gradient for water, as it always wants to move to where it is less, that is, down its gradient.

Ossicle L. From osseus = bony, pertaining to bone. Diminutive -icle = small, tiny bone. Auditory ossicles.
Ostium L. Ostium = door or opening.
Ovary L. From ovum (ovarium) = egg (ovum).
Oxytocin L. From oxy = quick or sharp; and toc = children. The hormone oxytocin is important in childbirth and bonding individuals to create close connections and affection.

P
Palate L. Palatum = palate.

Palmar L. Palma $=$ the palm of the hand.

Pampiniform L. Pampinus = tendrils, and forma = form. The pampniform plexus of veins in the spermatic cord resembles a number of interwoven tendrils.

Pan Gr. As a prefix meaning all, entire. All, or the whole of.
Pancreas Gr. Pankreas. From pan = all; and kreas = flesh, or meat.
Panniculus L. Diminutive of pannus $=$ cloth or covering. Hence a little covering.
Papilla L. Papilla = of, pertaining to, or resembling a nipple. Many structures and region are named papilla.

Parasympathetic Gr. Para = beside, and sympathetic. A term used for the autonomic nervous system.
Parathyroid Gr. From para = next to, near, alongside; and thyreos = shield; and eidos = like or shape.

Parenchyma Gr. Para = beside, and enchyma = infusion or juice. Attributed to Erasistratus, about 300 B.C. who coined it to signify "what is poured in".

Parietal L. Paries (and parietalis) = a wall. The parietal bones of the skull form walls the walls of the skull.

Parotid Gr. Para = beside, and ous (ot) = ear. The parotid gland lies just in front of the ear.
Patella L. Patella = little plate, small pan or dish; diminutive of pan (patina). Name of kneecap bone.
Pectinate L. Pecten = a comb (adjective of pectin); for structures with projections like the teeth of a comb.

Pedicle L. Pes (pedis) = foot, and the diminutive suffix -culus, 'little foot'. Word also meant a stalk of fruit. From this comes the use of the pedicle within organs to suggest the stalk of an apple or other fruit.

Peduncle ML. Pedunculus = footstalk. The equivalent to Latin pediculus which is a diminutive of pes (genitive pedis) = foot; therefore little foot. Cerebellar peduncles of the brain.

Pelicula L. Pellis = skin or pelt. Cognate with peel for pellicle, which is a thin layer supporting the cell membrane.

Pellucida L. Pellucidus = transparent, translucent, admitting the passage of light. From pellucere 'to shine through', rom per $=$ through and lucere $=$ to shine .

Pelvis L. Pelvis = basin. The pelvis is a basin-like structure.

Penia Gr. From penia in Greek and penae in Latin meaning "deficiency" or "poverty". Penia used like a suffix means "lack" or "deficiency."

Penis L. Penis = a tail; the male sexual organ.
Peri- Gr. Peri = around. For example, the pericardium is a membrane bag that goes around the heart.
Perineum Gr. Perinaion = the perineum; probably from peri = around, and naiein = to dwell. The Greek perina = scrotum was probably from the same root.

Peroneal Gr. Perone $=$ a brooch or pin (adj of peroneus), describing the shape of the peroneus muscles.
Pes L. Pes = foot. The plural is pedes.
Petrous L. = stony or rocky. For example the petrous portion of the temporal bone is like a rocky ridge.

Phagocyte Fr. Phagein, from Latin phago = to eat; and cyte = cell. A macrophage is a cell that is a big (macro) eater.

Phalanx Gr. Phalanx (plural phalanges) = soldiers in close order. Term for the bones of the toes and fingers.
Phallus Gr. Phallos and L. Phallus = penis. Also regarding an image of the penis.
Pharynx Gr. Pharynx = throat (adj pharyngeal and name of pharyngeus muscle come from same source).
Phrenic Gr. Phren = 1) diaphragm, and 2) brain. 1) From heart or diaphragm, we get the phrenic nerve. 2) For brain, we get phrenology and several compound terms ending in phrenia, such as schizophrenia, now transformed into frenzy.

Physiology L. Physio = nature, natural, physical; and logia = "study". This gives us 'the study of the normal function of living things'.

Pia L. Pius = kindly, delicate or tender. Pia is the feminine of pius, used with mater = mother, for pia mater which is the delicate meningeal layer that protects the brain and spinal cord.

Pilus ML. From pilaris = of or pertaining to hair; hairy. Arrector pili is a muscle attached to a hair.
Pineal L. Pinea $=$ a pine cone. Named from the shape of this body.

Pinna L. Pinna = a wing. Applied to the external ear.
Pinocytosis L. Pino = to drink; and -cytosis = of the cell, cell process.
Piriform L. Pirum = a pear; and forma = form or shape.

Pisiform L. Pisum = a pea; and forma = form or shape.

Pituitary L. Pituita = mucous secretion. Formerly, mucus from the nose and mouth was thought to come from the brain, and this structure was named accordingly. It may be that the word spit comes from the same origin.

Plantar L. Planta = sole of the foot. We used this adjective form but not the noun. Curiously enough, this word planta also meant a sprout, twig, or, as might be expected, a plant.

Plasmalemma Gr. From plassein = to shape. L. = to mold, shape. With -lemma = husk or rind. Plasmalemma is a plasma membrane which bounds a cell.

Platysma Gr. Platysma = broad; flat, like a plate. Thin flat neck muscle the platysma.
Pleura Gr. Pleura = the side of the body or the ribs. But the word has come to mean the sac surrounding the lung.

Plexus ML = braid, network; to twine, braid, fold, to plait. A net-like arrangement of parts.
Pneumo Gr. Pneumon = lung. The term pneumonia is lung with suffix -ia, which means disease.

Polymer L. Poly = many; and mer = part. A poly is the largest and most complex t configuration of a molecule. For example, glucose is a monosaccharide (monomer) and starch is a polysaccharide (polymer).

Polycatyly L. Poly = many; and dactyl = fingers or toes (digits). This condition is the presence of additional fingers and toes.

Pons L. Pons = a bridge; a connecting gallery, walkway or passage. The pons is a region in the brain.
Portal L. Porta = gate. The portal vein is the vein which enters the gateway of the liver.
Postero-L. Posterus $=$ behind .
Prepuce L. Prae (pre-) = before; may be an obsolete term putum, for penis; e.g. Prepus is the male foreskin.

Prolactin L. From pro = promoting or favoring; and lact = milk. Prolactin is a hormone that promotes lactation in mammary glands.

Pronate L. Pronare = to turn palm or face downward. Compare to supinator.
Prostate Gr. Pro = before, the root sta = stand, and the suffix -tes. In ancient Greece the word prostates meant a guard or protector - one who stood before. The prostate gland stands in front of the bladder.

Proximal L. Proximus = next to; closer to the site of origin.
Pseudopod L. Pseudo = false or phony; and pod = foot. Some cells have structures called pseudopods.
Psoas Gr. Psoa = a muscle in the loins. Pronounced 'soas'. In Greek a p before an s or tis silent.

Pterygoid Gr. From pteron = and eidés =-like (-oid). A wing-like structure. In Greek a p before an s or t is silent. Pronounced 'terygoid'.

Ptosis Gr. From piptein = falling, to fall. For example the falling or inability to keep the upper eyelid raised is ptosis. Pronounced 'tosis', as in Greek a p before an s or tis silent.

Ptyalin Gr. From ptualon = spittle, saliva, and from ptuein = to spit. This enzyme is the same as alphaamylase is made by salivary glands to digest starches in the mouth. The pancreatic amylase is another enzyme secreted by the pancreas into the small intestine. Pronounced 'tyalin', the p before $s$ or $t$ is silent.

Pubis L. Pubis = the pubic bone; of the pubic region.

Puncta L. Punctum, punct = point, e.g., lacrimal puncta of the eye.
Pupil L. Pupilla, diminutive of pupa $=$ a doll or little girl. Word pupa is for an early stage in the life of an insect. Also words pup, puppet, and pupil derive from this, in terms a young student. For the pupil of the eye, may have come from the reflection of objects seen over the opening of the iris.

Pyelos Gr. puelos = basin. A similar term is "pyelitis" means inflammation of the renal pelvis and calyces. The term pyelitis together with nephritis is collectively known as pyelonephritis, a urinary tract infection.

Pylorus Gr. Pyloros = gatekeeper; from pyle = gate, and ouros = a guard. The muscular ring of the pylorus guards the outlet of the stomach.

Pyriform L. Pirum = a pear, and forma = shape or form. Hence describing any pear-shaped structure.
Pyogenic Gr. from puon and puo = pus; and OE. From gen $+\mathrm{ic}=$ producing, pertaining to generation. Meaning conversion into, or process of discharging pus.

## Q

Quadratus L. Quadratus = a square in shape. Applied to the several square muscles.
Quaternary L. Quarter = one fourth, or a quarter. Some proteins have a quaternary ( $\left.4^{\text {th }}\right)$ structure.

## R

Radiata L. = radiant. For example, the corona radiata is the outermost layer of cells of the oocyte or egg cell. It means "radiant crown", due to its resemblance of a crown encircled by points representing solar rays.

Radius L. Radius = spoke of a wheel. Found in the writings of Galen applied to the bone now so named.

Ramus L. = branch. Example in rami (plural) communicates of nerves.

Rectum L. Rectus = straight. Galen named the terminal bowel because he found it straight in other animals.

Rectus L. Rectus = straight. Examples are the rectus abdominis and rectus femoris muscles of body.
Renal L. Ren = kidney. It is the adjective form of ren.

Respiratory L. re = again; and spirare = to breathe.
Reticulum L. = a little net. Sarcoplasmic reticulum is a network containing calcium ions.
Retina L. Rete = a net. Though there is no net-like structures in the retina, may be derived from Greek amphiblestron (which had two meanings), a surrounding coat and a fisherman's net, used in the first sense; but when translated into Latin, the second meaning was taken.

Retroperitoneal L. retro = back; and Gr; peri = around; and teino = stretch.
Retroversion L. Retro = backward, and versio = turning. A turning backward.

Rheumathoid Gr. Rheumat = tending to change; and oid = resemblance. For example, rheumatoid arthritis is a type of autoimmune disorder that causes pain and restricts movements in joints.

Rhomboid Gr. Rhombus = a lozenge, oid = resemblance. Rhomboid denotes a parallelogram with oblique angles and unequal sides. The rhomboid muscle is named because of its shape.

Risorius L. Risor = ridiculous, laughing. The risorius muscle draws the angle of the mouth outward to smile.

## S

Sacrum L. Sacer = sacred. Sacrum is the neuter form of sacer, and was applied to this pelvic keystone because this bone was thought to survive after death and form a part of the body after resurrection.

Sagittal L. Sagitta = arrow. Use to mean: 1) shaped like an arrow, 2) straight, and 3) running in an anteroposterior direction.

Salpinx Gr. Salpinx = a trumpet. A word the Greeks adopted from Crete. Applied to structures shaped like a trumpet or tuba. The combining form, salpingo-, appears chiefly in gynecological terms.

Saphenous Gr. Saphenes = clear or manifest; also possibly from Arabic, al-safin = hidden, because the vein is available for blood draws in only a small part of its course.

Sarcomere Gr. From sarx and L. sarco = flesh, meat; and meros = part. The functional unit of a muscle.

Sartorius L. Sartor = a tailor. This muscle was so named because it is employed in squatting in the usual position of an old fashion tailor, with the legs crossed.

Scalenes Gr. Form skalenos = uneven; having unequal sides. A triangular muscle with unequal sides.
Scaphoid Gr. Skaphe = a skiff or anything similarly hollowed out, and oid = resemblance; scaphoid bone.
Scapula L. Scapula = shoulder blade. In ancient times it was used in the plural to mean "the back".

Sciatic L. Sciaticus; originally from the Gr. Ischion = the hip. Hence the term applies to anything near, or pertaining to, the hip.

Sclera Gr. Skleros = hard; e.g., the white 'tough' outer layer of the eye is named the sclera.
Scoliosis Gr. From skolios = bent, or crooked. When a person's spine curves laterally.
Scrotum L. = purse-like. Probably transposed from scortum = a skin, hide (see corium) and influenced by scrautum = leather quiver for arrows.

Sebum L. sebum = tallow, suet, grease, fatty, oily. Probably related to sapo = soap. Plus -ous = characterized by; of the nature of, thus 'secreting' sebum.

Sella turcica L. Sella = saddle, and turcica = Turkish. A descriptive name for the saddle-shaped prominence of the sphenoid bone. The pituitary gland sits in this saddle.

Serosa Mod. L. Sersus = membrane giving off serum (watery fluid). Serous indicating 'watery' portion.
Serratus L. Serratus = notched, or serrated from serra $=$ a saw. The serratus muscle has a jagged edge.

Sesamoid Gr. Sesame = an herb, and oid = resemblance. Galen suggested this name for these little bones because they resembled the seeds of sesame.

Sigmoid Gr. Sigma = the Greek letter S, and oid = like. Earlier the letter sigma was written as a single curve (now the letter C), which explains why this is the name for that curved part of the large bowel.

Sinus L. Sinus = a bay or anything hollowed out.
Skeleton Gr. Skeletos = dried up.
Skin AS. Scinn = skin.

Skull AS. Skulle = a bowl.
Socket OE. Socket = spearhead; from OF. Soc = ploughshare. Later the meaning was transferred to mean a sheath or holder, the hollow into which something fits.

Soleus L. Solea = sandal, sole of a shoe, and a flat fish. The soleus muscle is not in the sole, but is flat. For the sole of the foot, see planater.

Soma Gr. Soma = the body. The somatic nervous system refers to the one controlling the body.

Sonography L. From sonus = sound; and graphy = recording process.

Sphenoid Gr. Sphen = wedge, and oid = like, resemblance. The sphenoid bone is wedge-shaped.
Sphincter Gr. Sphinkter = a band; from sphingein = to bind tight.

Sphing Gr. from Sphingo = Sphinx, originally in reference to the enigmatic nature of the sphingomyelin compound.

Sphygmomanometer Gr. from sphygmos = a pulse. Which became sphyzein = to throb, to pulse, to beat. The suffix manometer is from the Gr. manos = thin, rare; loose in texture, porous; scanty; and OF. -mètre = meter, or measure.

Spine L. Spina = a thorn; e.g, any sharp process of bone; later applied to vertebral column and spinal cord.
Splanchnic Gr. Splanchna = viscera or internal organs. This adjective is applied, for example, to the nerve supplying the viscera of the body.

Spleen Gr. Splen = spleen, perhaps originally related to splanchna = viscera. In Latin this root became lien after losing its initial sp. From splen, comes splenic and the combining form spleno-.

Squamous Gr. Squama = flat; covered with scales, scaly; fish-scale shaped.

Stapes L. Stapes = stirrup. The smallest of the three auditory ossicles (bones) resembles a stirrup.

Stratum L. = a cover or spread; a layer. Stratum functionalis is layer of endometrium that sloughs off.
Stenosis Gr. Stenos = narrow, -osis = condition. Applied to any narrowing of tubular structure, such as an artery, heart valve, or the esophagus.

Sternum Gr. Sternon = the male chest, limited to the breast bone (Galen).
Stomach Gr. Stomachos; originally derived from stoma = mouth, and applied to the esophagus for a while, with the thought that the gullet is the mouth of the stomach.

Styloid Gr. Stylos = pillar or needle, and oid = like; e.g., styloid process of the temporal bone.

Subclavian L. Sub = under; and clavis = key. Under the clavicle.

Sulcus L. Sulcus = shallow groove or furrow.
Supinator L. Supinare = to turn palm upward or on the back.

Supra L. Supra = above.

Sustenaculum L. Sustenare = to support (from sub = under and tenere $=$ to hold), and - culum $=$ a diminutive suffix. Applied to a projection from the os calcis which supports the talus.

Suture L. Sutura = a sewing stitch or seam. In anatomy, a suture is found between the bones of the skull.
Sympathetic Gr. Syn = with, and pathos = feelings or emotions (suffering).

Symphysis Gr. Symphysis = a growing together; from syn = with, and physis = growth; e.g. Pubic symphysis.
Synapse Gr. Syn = together, and haptein = to touch.
Syndactylism Gr. Syn = together, daktylos = finger. A congenital anomaly in which the fingers are webbed together.

Systole Gr. Syn = together, stellein = to draw or synch. To draw together or to contract, as the heart does during systolic contraction.

## T

Tachycardia Gr. Tachys = swift or fast, and kardia = heart. Higher than normal heart beat.
Taenia Gr. Tainia, and later L. Taenia = a ribbon, tape, or fillet. This term, used as the name of a genus of tapeworms, is also applied to the longitudinal muscle of the colon.

Talipes L. Talipes = club foot; from talsus $=$ ankle, and pes $=$ foot.
Talus L. Talus = ankle.

Tarsus Gr. Tarsos = instep. For example the tarsal bones of the foot.

Temporal L. Temporalis = earthly, of time. In anatomy pertaining to the temples.
Tendon L. Tendo $=$ a tendon; from tendere $=$ to stretch.

Tentorium L. = tent. The tentorium cerebelli is a tent-like meningeal covering in the brain.
Tensor L. Tensor = stretcher or puller.
Thalamus Gr. Thalamos = inner chamber, bedroom. Latin thalamus = inner chamber, den, liar, vault, or sleeping room. The thalamus is a region of the diencephalon deep within the brain.

Thenar Gr. Thenar = palm of the hand. Later limited to the radial thumb side of the palm.

Thorax Gr. Thorax = chest.

Thymus Gr. Thymos = a warty growth. Also = distinct outgrowth; result of disease or abnormality. The thymus gland was named for its resemblance to the bud of the herb thyme.

Thyroid Gr. Thyreos = a shield, and oid = resemblance. From a figure-of-eight shield used by the Greeks.
Tibia L. Tibia $=$ a flute; from a resemblance in shape.

Tomy Gr. Tome = a cutting. In anatomy, ana = apart; and tomy = cutting.

Tongue AS. Tunge = tongue.
Tonic Gr. Tonikos = 'of or for stretching', from tonos, French tonique. Relating to or characterized by muscular tension, "maintaining the healthy firmness of tissues" from the 1680s.

Tonsil L. Tonsilla = a small rounded mass tonsil. The tonsils.

Tooth AS. Toth = tooth.

Trabecula L. Trabs = beams, timber. The -cula is diminutive of this = little beam.
Trachea Gr. Tracheia = rough. Tracheia has feminine ending to agree with arteria. The Greeks believed arteries contained air; Aristotle called the arteries smooth, while he named the windpipe a "rough artery".

Tragus Gr. Tragos = a male goat. This part of the external ear received this name because of the hairs which grow there, like a billy goat.

Transverse L. Transversus = crosswise; perpendicular to longitudinal axis. Also cross-section.

Trapezius Gr. Trapeza $=$ a table. Originally a contraction of tetrapeza $=$ four-legged. Multiple angled.

Triceps L. Tri = three, and ceps or caput = head.
Tricuspid L. Tri = three, and cuspis = point. Hence applied to the heart valve that has three leaflets.

Trigone Gr. Trigonon, from tri = three, and gonia = angle. Used of several triangular areas, but especially the triangle in the urinary bladder.

Trochanter Gr. Trochanter = a runner; derived from trochos = a wheel. The name of the processes below the neck of the femur.

Trochlea L. Trochlea = pulley. Examples are the trochlea of the orbit, and trochlea of the ulna bone.

Trophic Gr. Trophe (troph) = to feed or nourish; and tropic = to turn or change. Related to trephein = make thrive, nourish, rear; to make solid, congeal, thicken.

Tropo- L. = turn, or a turning. Troponin is a regulatory protein in muscle.

Truncate L. Truncus = stem or trunk. A cut across like a tree stump.
Tubercle L. Tuber $=$ a knot or collection, and -culum $=$ a diminutive suffix. Little knot.
Tuberculosis L. Tuberculum = small swelling, pimple; diminutive of tuber = lump. Plus -osis= condition. Used in reference to the tubercules which form in the lungs.

Tuberosity L. Tuber = knob or localized collection, and -osity = condition.
Tunica L. Tunica $=$ shirt or covering. Often used to mean layer in anatomy.
Turcica L. = Turkish. The sella tursica is a bony structure in the skull where the pituitary gland sits. Sella = saddle, so this term means Turkish saddle.

Tympanum Gr. Tympanon = a drum. Applied to the eardrum, or the tympanic membrane.

U
Ulna L. Ulna = elbow, forearm.
Umbilicus: L. = navel, Gr. omphalos = navel.

Uncus L. Uncus = a hook. Applied to several hook-shaped structures in the brain.
Ureter Gr. Outeter, from ouron = urine, and the suffix -ter, denoting the instrument. Applied to the upper urinary canal. Also urethra = passage of urine.

Uterus L. Uterus = womb. Its relationship to uter = bag of goat skin, has been suggested.
Uvula L. Uva = a grape, and the diminutive suffix -ula. Hence meaning a little grape.

## V

Vagina L vagina $=$ a sheath. From its shape and function.
Vagus L. Vagus = wandering. Indicating widespread distribution. English words vague and vagrant come from this etymology.

Vallate L. Vallum = rampart, wall; or to surround with a wall. Used as 'having a raised edge surrounding a depression' referring to the circumvallate papillae taste bud on the tongue.

Varus L. Valgus = bowlegged. Used in the term coxa valga to denote an abduction of the thigh due to deformity of the neck of the femur. In contrast, genu valgum has been used to mean knock-kneed.

Vascular L. Vasculum = a small vessel. For example, blood and lymphatic vessels.

Ventricle L. Ventralis = of or pertaining to the belly or stomach. Also from Latin venter = belly, paunch; stomach, appetite; womb, unborn child. From Latin ventriculus which literally means "little belly". Pertains to the structures of the heart and fluid filled chambers of the brain.

Vermiform L. vermis = worm, and forma = form. Its use is not limited to the vermiform appendix.

Vestibule: L. = passage.

Vertebra L. Vertebra $=$ a joint of the spinal column; from vertere $=$ to turn.

Vitreous L. From vitrum = of glass, transparent.

Vomer L. = plowshare. The resemblance of this facial bone to a plowshare.
Villus L. shaggy hair

Viscera L. Viscera, plural of viscus = an internal organ. More often used in the plural form.

Vitreous L. Vitreus = glassy. Applied to the vitreous humor of the eye. Word comes originally from vitrum.
Vitrum L. Vitrium = glass; and from this comes the phrase in vitro, meaning in a glass receptacle, as contrasted with in vivo, meaning in the living body.

Volar L. Vola = palm or sole

Vomer L. Vomer = ploughshare. The bone named vomer suggests a ploughshare by shape.

## X

Xiphoid Gr. Xiphos = sword, and oid = like. The name of the pointed tip of the sternum.

## Z

Zonula L. Zona = a girdle, belt, or zone, and the diminutive suffix -ula, meaning 'little'.

Zygoma Gr. Zygoma = bolt or bar, related to zygon = a yoke, union. Applied to the zygomatic (cheek) bone of the face because of its shape and function in uniting other bones.

Zygote Gr. Zygon = a yoke, union. This is the union of the egg cell and the sperm to create a fertilized egg cell.

